

### **REMARKS**

The undersigned does not have a memory or a record of a telephone conversation on December 10, 2006 (a Sunday), or on any other date, in which a provisional election was made to prosecute the inventions of Group I, claims 1-8. Accordingly, it is not conceded that this election was properly made. However, solely to further the patent application process, Applicants will accept the election of Group I, claims 1-8, with traverse. The traversal is made, in addition to the above, on the grounds that it is believed that the examination of claims 9-11 will not present an undue burden to the Examiner.

The Patent Office has also required an election of species, but does not appear to have indicated what species exist in the application. To the extent that a species election must be made in order to prevent this response from being treated as non-responsive, Applicants hereby elect the species of a waveguide and a cladding having a different refractive index than the waveguide, and note that this species includes claims 1-8.

Claims 1-11 are now pending for examination, with claims 9-11 being withdrawn.

### **Rejections under 35 U.S.C. §103(a)**

Claims 1-8 have been rejected under 35 U.S.C. §103(a) as being unpatentable over “Keyworth” in view of any of Chaval, *et al.*, U.S. Patent No. 5,258,024 (“Chaval”); Bonvallot, *et al.*, U.S. Patent No. 5,807,906 (“Bonvallot”); or Japanese Patent No. JP 8137375 (“JP ‘375”). The Patent Office did not specifically identify “Keyworth” in its rejection. However, it is believed that the Patent Office intended to refer to Keyworth, *et al.*, U.S. Patent No. 5,534,101 (hereinafter, “Keyworth”), as this reference was cited in an Information Disclosure Statement that was acknowledged and signed by the Examiner, and this response is accordingly based upon this belief. Applicants respectfully request correction if this is incorrect.

Although Keyworth appears to be directed to forming waveguides, Chaval and Bonvallot do not appear to be directed to waveguides, but instead are directed to forming lenses (as the Patent Office states in the Office Action), and JP ‘375 appears to be directed to producing holograms. The Patent Office has not provided a teaching, suggestion, or motivation for one of ordinary skill in the art to combine Keyworth with any of Chaval, Bonvallot, or JP ‘375, as is required to form a *prima*

*facie* case of obviousness under §103(a), and Applicants do not see any disclosure or suggestion in Keyworth that would lead such a person to make any of these combinations, as these references appear to be from different fields of technology. The Patent Office states that:

It is submitted that one of ordinary skill in the art would have recognized and known that refractive index differences in the same polymeric material would be generated by differential radiation and that would have been an obvious way to construct a desired waveguide to facilitation formation of the desired refractive index directly where desired. Such [a method] would also save on material and inventory costs that only one type of polymer system would be needed instead of two for the core and cladding.

However, these statements appear to be mere speculation on the part of the Patent Office, and the Patent Office has not pointed to any reference in the prior art of record that supports these statements. Accordingly, the Patent Office's statements appear to be based on hindsight reasoning, which is impermissible. The Patent Office cannot pick and choose from among prior art references to form its rejections, but must provide a reasoned analysis, supported by objective evidence (such as a teaching, suggestion, or motivation in the prior art of record), as to why one of ordinary skill in the art would form the combination used to reject the claims as pending.

Furthermore, although the Patent Office has identified references teaching lenses having differences in refractive index and holograms having differences in refractive index, the Patent Office has not been able to provide a reference that teaches that such differences in refractive index are useful in a waveguide. Given the fairly lengthy time between the filing date of the references and the filing date of the instant invention, it would appear that the Patent Office would be able to locate such a reference. Accordingly, without such a reference, it is believed that the instant invention is patentable over the combination of Keyworth, Chaval, Bonvallot, and/or JP '375. Accordingly, Applicants respectfully request that the rejection of claims 1-8 be withdrawn.

In addition, with respect to independent claim 5 and dependant claims 6-8, the Patent Office states that Keyworth discloses the methods set forth in instant claim 4 (which claim depends from independent claim 1). However, to the extent that Keyworth discloses instant claim 4 (which Applicants do not concede), the Patent Office has not alleged that Keyworth, or any combination of Keyworth, Chaval, Bonvallot, or JP '375 discloses the invention claimed in independent claim 5, or

dependent claims 6-8, each of which depend from independent claim 5, i.e., there does not appear to be a specific rejection of independent claim 5 or dependent claims 6-8. Accordingly, Applicants respectfully requested that the rejection of claims 5-8 be withdrawn, or at least, a rejection of these claims be provided.

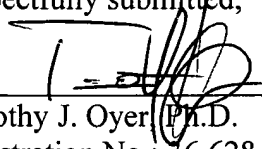
**CONCLUSION**

In view of the foregoing remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after the foregoing remarks, that the application is not in condition for allowance, the Examiner is requested to call the undersigned at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

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Respectfully submitted,

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